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KUDZU (*Pueraria thunbergiana*).

Kudzu is a large-leaved, woody, leguminous vine, native to Japan, which grows with remarkable rapidity. It succeeds well in every part of the United States where it has been tried, and grows in various types of soils. Where the summers are warm and moist it grows with great luxuriance. Kudzu is a most excellent vine for arbors and porches, for which purpose it is grown in most of the southern cities, climbing to a height of 60 feet or more. It succeeds well, however, as far north as Nova Scotia. The leaves resemble in a general way those of the common bean, but they are larger and angular lobed, besides being tougher in texture; the stems and leaf stalks are somewhat hairy. As far north as Washington the vine will bloom, but only occasionally, and then late in the fall. The blossoms are dull purple-red and hang in clusters. The pods are thin, very hairy, and do not mature in the latitude of Washington.

The Japanese utilize kudzu in many ways, growing it especially on rough, rocky land or hillsides too steep to be cultivated. The fiber of the stems is used largely to make a sort of cloth, known in commerce as "grass cloth." Various other articles of utility, such as portmanteaus, are also made from this fiber. The thick roots are rich in starch of a high quality, which is used especially to make cakes and noodles. In former times it is said that kudzu played an important part in periods of famine. For starch making, the roots are dug after the leaves fall in the autumn, or before the buds burst in the spring. The Japanese also make hay from the kudzu vine, especially to feed to sick horses, as it is said that they will eat this greedily when they refuse other feed. It is more generally fed green.

While kudzu has been grown in the United States for many years, at least since 1876, it is only recently that it has created interest as a forage crop, due mainly to the work of Mr. C. E. Pleas, of Chipley, Fla. Attracted by the remarkable luxuriance of the plant and the fact that horses and cows ate the leaves greedily, he cured some as hay and found it equally palatable to animals. He then planted a small field, probably the first of the kind ever planted in this country. Under field conditions kudzu sends out long prostrate branches which root at many of the joints and send up ascending twining branches to a height of 2 to 4 feet. Eventually these become separate plants as the prostrate stems usually die between the rooted joints. Such a field when full grown presents much the appearance of a thick field of cowpeas or soy beans. It can be readily cut with a mower, and the hay cures more readily than most legumes, as the leaves are less juicy. There is practically no shedding of the leaves in curing.

Some fields in northern Florida have yielded three cuttings of hay a season when well established, and yields of as high as 10 tons per acre have been claimed. In other fields the total yield has been smaller than that of velvet beans. It seems probable that under favorable conditions kudzu will prove a very profitable crop, notwithstanding the fact that its perennial nature does not permit of growing a winter crop in rotation.

The seed of kudzu does not germinate very well, so that the plant is usually propagated by layers. If seed is used, it should be planted in a well-prepared seed bed and the plants transplanted after they are well rooted. They should be planted 10 feet apart. The first season seedlings will produce stems 6 to 12 feet long, and by the end of the second season they should entirely cover the ground.

Cuttings.—Kudzu may be propagated by cuttings, but under field conditions a large percentage fail, so the method can not be recommended. The best success with cuttings has been secured by using well-ripened wood and setting out very early in the spring.

Transplantings.—A new field of kudzu is best established by the transplanting of well-rooted plants. These should be planted about 10 feet apart each way, and the first season will pretty well cover the ground with prostrate runners. The second season a fair crop should be obtained, but the field will not produce best results till the third year. The planting should be done early in the spring, but in the extreme south may be done at any time during the winter. To avoid the loss of land the first season, corn may be planted after setting out the kudzu, and the two do not interfere with each other.

FEEDING VALUE.

So far as chemical analyses indicate, kudzu is very nutritious, being comparable to clover and alfalfa. The leaves, however, are considerably tougher. Horses, cows, and sheep eat the green leaves readily as well as the hay. Its actual value as a feed, either for meat or for milk production, remains to be determined by experiment, but there is little doubt that it is high.

SUGGESTIONS.

In view of the limited experience with kudzu, it is wisest to make an experimental planting first of a small area. The plant will probably succeed nearly everywhere in the eastern United States, but it is doubtful if it is profitable to plant on high-priced land. If plantings are made it should be realized that the kudzu must occupy the land for a period of years to be profitable.

The Japanese plant it extensively on steep slopes and other untillable land, using it mainly for pasturage. In this country little success has thus far been secured by planting on uncultivated land, but there is need of many more trials of this sort.

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